Service
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For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
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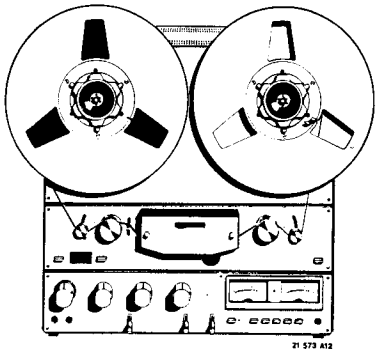

Service Manual

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Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

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PHILIPS

CS 74 680

I. TECHNICAL SPECIFICATIONS

Mains voltages	: 220 V (110-127-240 by changing connections)
Mains frequencies	: 50-60 Hz (no adaptation required)
Power consumption	: 25 W
Number of tracks	: 4
Max. reel diameter	: 18 cm
Tape speeds	: 4.75 cm/s ± 1 % : 9.5 cm/s ± 1 % : 19 cm/s ± 1 %
Wow and flutter at	
4.75 cm/s	: ⩽ ± 0.2 %
9.5 cm/s	: ⩽ ± 0.15 %
19 cm/s	: ⩽ ± 0.1 %
Winding time for a 26.5 cm reel with LP tape (1080 m)	: < 360 s
Input sensitivities	
MIC	: 0.3 mV/2 kΩ
LINE IN 1	: 50 mV/100 kΩ
LINE IN 2	: 2 mV/10 kΩ
Output voltages	
LINE OUT	: 0-1 V/5-10 kΩ
MULTIPLAY	: 1 V/1 kΩ
PHONES	: 3 V/600 Ω
Overall frequency response according to DIN 45511 with BASF C264Z tape	
4.75 cm/s	: 35 Hz ... 12,500 Hz
9.5 cm/s	: 35 Hz ... 18,000 Hz
19 cm/s	: 35 Hz ... 25,000 Hz
Playback frequency response with DIN test tape	
4.75 cm/s	: 80 Hz ... 6,300 Hz
9.5 cm/s	: 40 Hz ... 12,500 Hz
19 cm/s	: 40 Hz ... 12,500 Hz
Equalisation	
4.75 cm/s	: 3180 + 120 µs
9.5 cm/s	: 3180 + 90 µs
19 cm/s	: 3180 + 50 µs
Signal-noise ratio weighted curve A, d = 3 %	
4.75 cm/s	: ⩾ 56 dB
9.5 cm/s	: ⩾ 60 dB
19 cm/s	: ⩾ 62 dB
Signal-noise ratio DIN, for all speeds unweighted, d = 3 %	: ⩾ 48 dB
Distortion (at 333 Hz and 0 dB output)	: ⩽ 3 %
Crosstalk attenuation between channels	
⩽ 500 Hz	: ⩾ 25 dB
1 kHz	: ⩾ 40 dB
⩾ 6300 Hz	: ⩾ 25 dB
between tracks	
35 ÷ 200 Hz	: ⩾ 35 dB
1 kHz	: ⩾ 60 dB
Erase damping	: ⩾ 60 dB
Bias and erase frequency	: 100 kHz ± 10 %
Dimensions (w x h x d)	: 442 x 430 x 206 mm
Weight	: approx. 9 kg

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II. CONTROLS

Figs. 1 and 2

		Designation on recorder	Designation in diagram
1	Reel spindles		
2	Tape tension comparators		
3	Volume control for cueing (monitoring during fast winding)	+ ◀CUEING▶ –	
4	Tape counter with zero reset and zero stop	RESET ZERO STOP	SK802
5	Mains switch	POWER	SK0
6	Recording level controls, L/R = left/right channel	L/R RECORDING	R701/751
7	Output level control for line output (30)	LINE OUT	R702/752
8	Volume control for headphones	PHONES	R703/753
9	Fine control for tape speed, with indicator	PITCH CONTROL	R704 D471
10	Recording level meters, LEFT = left channel and tracks 1-4, RIGHT = right channel and tracks 3-2	LEFT RIGHT	ME1 ME101
11	Peak level indicator for both channels	PEAK	D10
12	Microphone jack for left channel	MIC.L	BU5

13	Microphone jack for right channel	MIC.R	BU105
14	Speed selector	SPEED	SK1
15	Track selector	TRACK	SK3
16	Monitor switch, also cueing switch	MONITORING	SK4
17	Recording button with indicator	REC	SK5
18	Start button	PLAY ▶	SK6
19	Pause button	PAUSE‖	SK7
20	Fast rewind button	REW ◀◀	SK8
21	Fast forward wind button	FF ▶▶	SK9
22	Stop button	STOP ■	
23	Headphones jack	PHONES	BU6

Fig. 2

24	Mains cord		
25	Handle		
26	Type plate		
27	Remote control connection	REMOTE	BU401
28	Line input, "Line-in", L/R = Left/Right channel	LINE IN 1	BU3, BU103
29	Connection for Sound on Sound multiplay recordings	MULTIPLAY	BU2
30	Line output L/R = Left/Right channel	LINE OUT	BU4, BU104
31	Line input, "Line-in" L/R = Left/Right channel	LINE IN 2	BU1/BU101

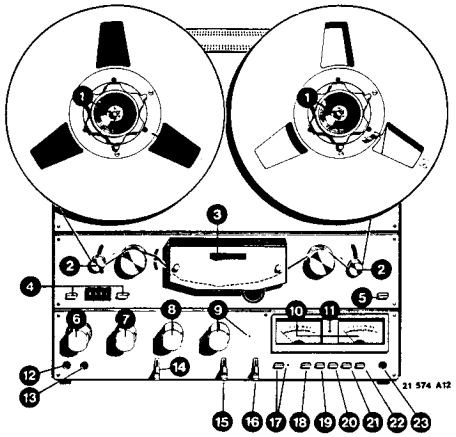

Fig. 1

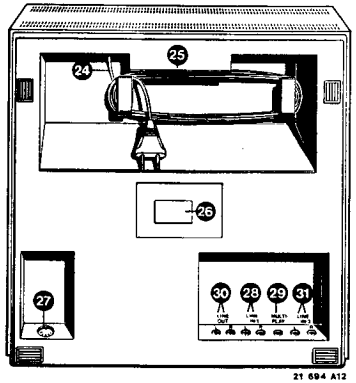

Fig. 2

III. DISMANTLING

Figs. 3 and 4

1. Backcover

- Remove the 5 screws G and the two supports F at lower side.
- Slide backcover backwards.

2. Head cover and cueing control

- Remove 2 ornamental screws E.
- Head cover and cueing control can be taken from recorder.

3. Upper ornamental plate

- Remove 5 ornamental screws A.
- Ornamental plate can be removed after being slid slightly downwards.

4. Lower ornamental plate

- Remove backcover.
- Remove from the back the bushes on the spindles of the tape tension rollers D.
- Remove the tape tension rollers D from the set by pulling them forwards.
- Remove the upper ornamental plate.
- Remove 9 screws B, the knobs of the lever switches and of the controls.
- Ornamental plate can now be taken from recorder.

5. Indicators and overmodulation LED

- Remove lower ornamental plate.
- Remove ornamental frame in front of indicators.
- Indicators can be taken out of recorder in forward direction.
- Overmodulation LED is accessible after removal of indicators.

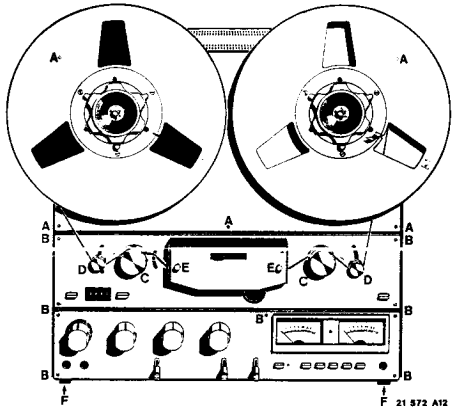

Fig. 3

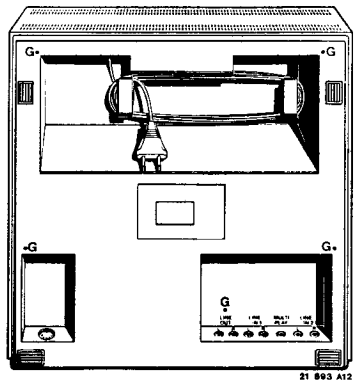

Fig. 4

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IV. ADJUSTMENTS AND CHECKS

1. General remarks

- The electrical measurements and adjustments refer to the left channel. The connecting points and controls for the right channel are given in brackets.
- Before each measurement or adjustment with running tape, heads and tape guides should be demagnetized and cleaned.
- Do not use magnetized screwdrivers.
- All voltages given have been measured with an electronic voltmeter.
- The outputs measured should be terminated with a resistor of 100 kΩ.
- Adjusted cores should be sealed.
- Adjusted screws and nuts should be lock-painted.
- Test tapes used:
  . BASF-C264Z - 3922 566 21640
  Unmodulated tape.
  . DIN test tape 9.5
  For adjustment of head inclination and azimuth and check of the frequency response during playback.
  . To check the tape speed it is possible to use:

3150 Hz	4.75 cm/s	3922 566 21370
3150 Hz	9.5 cm/s	3922 566 21380
3150 Hz	19 cm/s	3922 566 21390

2. Tape guides (item numbers 224, 229, 241, 273)

- The 4 tape guides have been accurately adjusted by the factory and they should never be replaced simultaneously, for in that case there will be no reference point left.
- Insert a tape and select PLAY mode.
- The height of the replaced tape guide should be such that the tape passes the outer tape guides at the lower side and the inner tape guides at the upper side.

3. Tape tension comparators

To the indication on brackets 521 and 532 applies: each mark is 2°.

Mechanical
The force required to keep the lever in position −8° should be 0.9 N. This force can be adjusted by changing the suspension points of spring 217, 289.
After adjustment, the force required to keep the lever in position +4° should be 0.7 N.

Electrical
The "output" (point 3 panel 3 A and point 1 panel 3B) should be loaded with 100 kΩ ± 5 %.
The voltage should be measured with a voltmeter Ri ⩾ 1 MΩ.
In position 0° the voltage at the "output" should be 7.5 V ± 0.2 V. The voltage can be adjusted by shifting the metal core (bracket 523, 538) after screw M2x4 has been loosened.
After adjustment the voltage at the output should be 5.7 V ± 0.3 V in position +8°.

4. Brake (Fig. 6)

- When the brake solenoid is energized clearance A between brake shoe and reel disc should be ⩽ 0.8 mm. The brake shoe should **not** interfere with the reel disc. The clearance can be adjusted by turning wheel C.
- For winding the brake torque should be between 80 mNm and 88 mNm.
  Brake torque = force x arm.
  The brake torque is adjustable by changing suspension point B of spring F2.

5. Reel disc (Figs. 8 and 9)

Height adjustment
- Insert a tape.
- Select REW mode for checking or adjusting the left-hand reel disc and FF mode for checking and adjusting the right-hand reel disc.
  The tape should wind in the centre of the reel.
  The height of the reel disc can be adjusted by turning adjusting screw G (accessible via backcover).
- The axial play should be between 0.1 mm and 0.15 mm. This is adjustable with adjusting screw H which is countersunk in adjusting screw G.
- The clearance between the mounting plate of the reel disc and the cabinet should be equal at the three fixing points.
  The clearance is adjustable with the lower fixing screw.

Replacement
- Attention to toothing of reel disc and gear. They are not the same left and right. (Check that reel disc is clean and lubricate with Alvania.)
- Remove gear A from motor shaft by loosening two bolts B.
- Insert reel disc shaft partially in bearing and check shaft distance I of reel disc and motor. This distance I should be 33.8 mm ± 0.1 mm and is adjustable by loosening screws J and displacing reel disc bearing in slotted holes K.
  Measure this distance by means of caliper gauge and recheck after tightening screws J.
- Fix gear A and adjust height C by means of screws B.
- Locate earth spring (item number 234) and guide it through eyelet of solder tag L.
- Guide reel disc shaft through bearing and lock it with clamping ring (3,2 mm).
- Completely tighten adjusting screw G (clockwise). Press pulley E (for left-hand side together with counter belt) against stop F and fix with screw D.
- Adjust height of reel disc and axial play as described above.

6. Flywheel (Fig. 7)

Perpendicular adjustment of capstan
- Insert a DP tape.
- Select PLAY mode.
  Turn screw A until tape runs flat between capstan and pressure roller.
- Clearance between bearing and oil-retaining ring should be between 0.5 mm and 0.8 mm.
  This clearance is adjustable by moving the oil-retaining ring.

7. Pulling force on tape

Below applies:
"REW-lever" is, seen from the back, the right-hand tape tension lever.
"FF-lever" is, seen from the back, the left-hand tape tension lever.

- Insert an 18 cm tape (approx. in middle of tape).
- Select PLAY mode.
  Adjust with R471 the "REW-lever" to +4° ± 1°.
  Then the "FF-lever" should be adjusted to −8° ± 1° with R477.
- Select PAUSE mode.
  Press down the brake bracket rod until the brake shoes are released from the reel discs.
  Adjust with R475 the "FF-lever" to +4° ± 1°.
- Select FF mode.
  Adjust after approx. 5 s the "FF-lever" to −8° ± 1° with R473.
- Select REW mode.
  Check after approx. 5 s that "REW-lever" is at −8° ± 2°.

8. Speed adjustment

- Connect a wow and flutter meter to BU4/BU104 LINE OUT.
- Insert a test tape having a frequency of 3150 Hz recorded at 4.75 cm/s, 9.5 cm/s or 19 cm/s dependent on the speed to be adjusted on the set and play it back. Adjust for correct speed by means of one of the trimming potentiometers (see table below).
- After the speed adjustment the wow and flutter is allowed to be as indicated in the table below.

Speed	Trimming potentiometer	Wow and flutter
4.75	R801	⩽ ± 0,2 %
9.5	R802	⩽ ± 0,15 %
19	R803	⩽ ± 0,1 %

9. Suppression of radiation from erase oscillator signal

- Set recorder in position: 19 - ST - TAPE CUEING - REC - PLAY.
- "LINE-OUT" control at "MAX", other controls at "0".
- No tape in recorder.
- Adjust for minimum voltage (⩽ 10 mV) on BU3 (BU103) by means of L1 (L101).

10. Playback head (Fig. 5)

- Height and inclination of heads supplied by Service have already been adjusted in factory.
- Tape guides should have been adjusted to correct height (see chapter ADJUSTMENTS AND CHECKS, paragraph 2).

10.1. Head inclination
- The front of the head should be exactly parallel to the tape or perpendicular to the mounting plate.
- Check:
  Playback the 10 kHz azimuth adjustment section of the DIN test tape. Brake the left-hand reel slightly by hand and measure the output voltages of both channels. Braking should not cause the output voltage of both channels to increase by more than 2 dB. (Should this be the case, the tape path must be checked.) If, as a result of braking, only the output voltage of the left-hand channel increases by more than 2 dB, the head inclines backwards. If braking only causes the output voltage of the right-hand channel to increase by more than 2 dB, the head inclines forwards.
  Head inclination is adjustable with screw A.

10.2. Azimuth
- Playback the azimuth adjustment section of the DIN test tape.
- The TRACK selector should be in position ST. The signal should be as large as possible for both channels simultaneously. This is adjustable with screw C.

11. Adjustment of playback amplifier

- Set recorder in position: 9.5 - ST - TAPE CUEING - PLAY.
- LINE-OUT control at maximum.
- Insert a DIN reference tape for 9.5 cm and playback the reference level section.
- Adjust for an output voltage of 0.6 V ± 0.5 dB on BU4 (BU104) by means of R41 (R141).

12. Playback frequency response

- Set recorder in position: 19 - ST - TAPE CUEING - PLAY.
- LINE-OUT control at maximum.
- Insert a 19 cm DIN reference tape and playback the frequency response section.
- The frequencies 40 Hz and 12.5 kHz should be within 7 dB with respect to the reference frequency.
  The frequencies between 250 Hz and 6300 Hz should be within 5 dB with respect to the reference frequency.

13. Recording head (Fig. 5)

- Height and inclination of the heads supplied by Service have already been adjusted in factory.
- Tape guides should have been adjusted to correct height (see chapter ADJUSTMENTS AND CHECKS, paragraph 2).
- Connect the recording head as playback head by inserting the plug of the recording head in the socket of the playback head on PC-board 1.
  Plug 3 in connector 4.
  Plug 4 in connector 3.
- If necessary, head inclination and azimuth should be adjusted as described for playback head.
- Reinsert the plugs in the original connectors.
- Set recorder in position: 19 - ST - SOURCE - PLAY - REC.
- Insert a reference tape (BASF C264Z).
- Apply a signal of 1 kHz to BU1 (BU101).
- Set the indicators to 0 dB with recording controls.
- Set recorder in position TAPE CUEING.
- The output signal should be maximum and the phase difference should be < 10°.
  This is adjustable with screw C.

- Increase the frequency to 10 kHz.
- The phase difference should be smaller than 45°
  If necessary, readjust with screw C.

14. Adjustment of channel equality, indicator reading and recording amplifier

- Set recorder in position: 9.5 - ST - SOURCE.
- Apply a signal of 330 Hz, 500 mV to BU1 (BU101).
- LINE-OUT control at maximum.
- Adjust for 1 V output voltage on BU104 with recording level control for right-hand channel.
  Set recording level control for left-hand channel to same position as for right-hand channel and adjust for 1 V output voltage on BU4 with R214.
- Adjust for a 0 dB indicator reading with R78 (R178).
- Insert a reference tape (e.g. BASF C264Z).
- Set recorder in position: SOURCE - REC - PLAY.
- Apply a 330 Hz signal until 1 V appears on LINE-output BU4 (BU104) (indicator reading 0 dB).
- Set recorder in position TAPE CUEING.
- Adjust for 1 V voltage on BU4 (BU104) with R63 (R163) (indicator reading 0 dB).

15. Adjustment of bias, check of overall frequency response and distortion

- In case of a correct adjustment of the bias, a compromise must be found between frequency response and distortion.
  The target value is 8 mV (across R61, R161), and is adjustable with R90, R190.
- Set recorder in position: 19 - ST - TAPE CUEING - REC - PLAY.
- Insert a frequency tape (BASF C264Z).
- The frequency response should be measured at −26 dB.
  The frequencies 35 Hz and 25 kHz should be within 7 dB.
  The frequencies between 250 Hz and 6300 Hz should be within 5 dB.
  The reference point is at 1 kHz.
- The distortion measured at 0 dB, should be smaller than 3 %.
  If the high frequencies are too much attenuated, the bias current will be too high. If the high frequencies are too strong and/or if distortion is audible, the bias current will be too low.
  This is adjustable with R90/R190.
- If R90/R190 has to be adjusted, repeat the frequency response measurement.

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V. LUBRICATING INSTRUCTIONS

- Mobil oil SHC 634 – 4822 390 10074.
  Capstan bearings item numbers 238, 324.
- Shell Alvania 2 – 4822 389 10001.
  Sliding surfaces of item numbers 266, 296, 309, 329, 526.
- Silicone grease medium 300 – 4822 390 20031
  Left-hand shaft of item number 309.
- Heavy medium DTE – 4822 390 10065
  Right-hand shaft of item number 309.

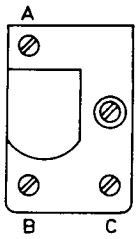


Fig. 5

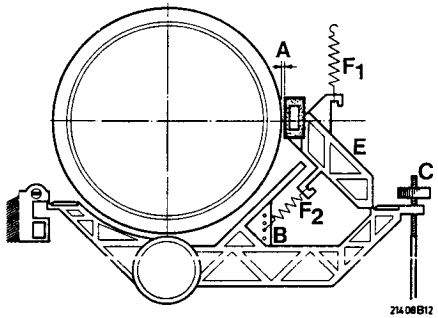


Fig. 6

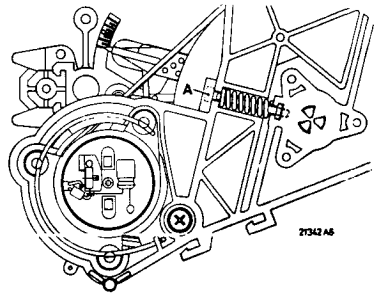


Fig. 7

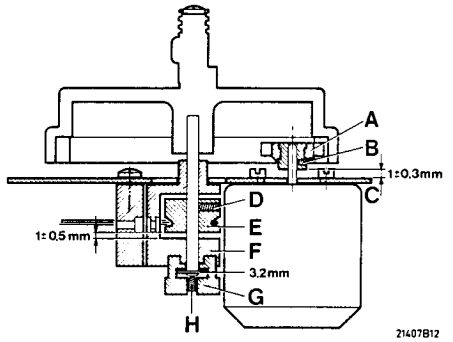


Fig. 8

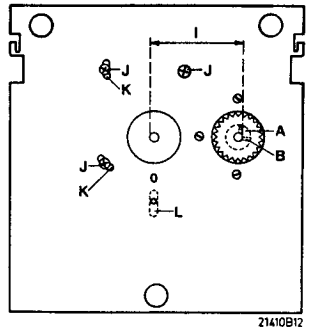
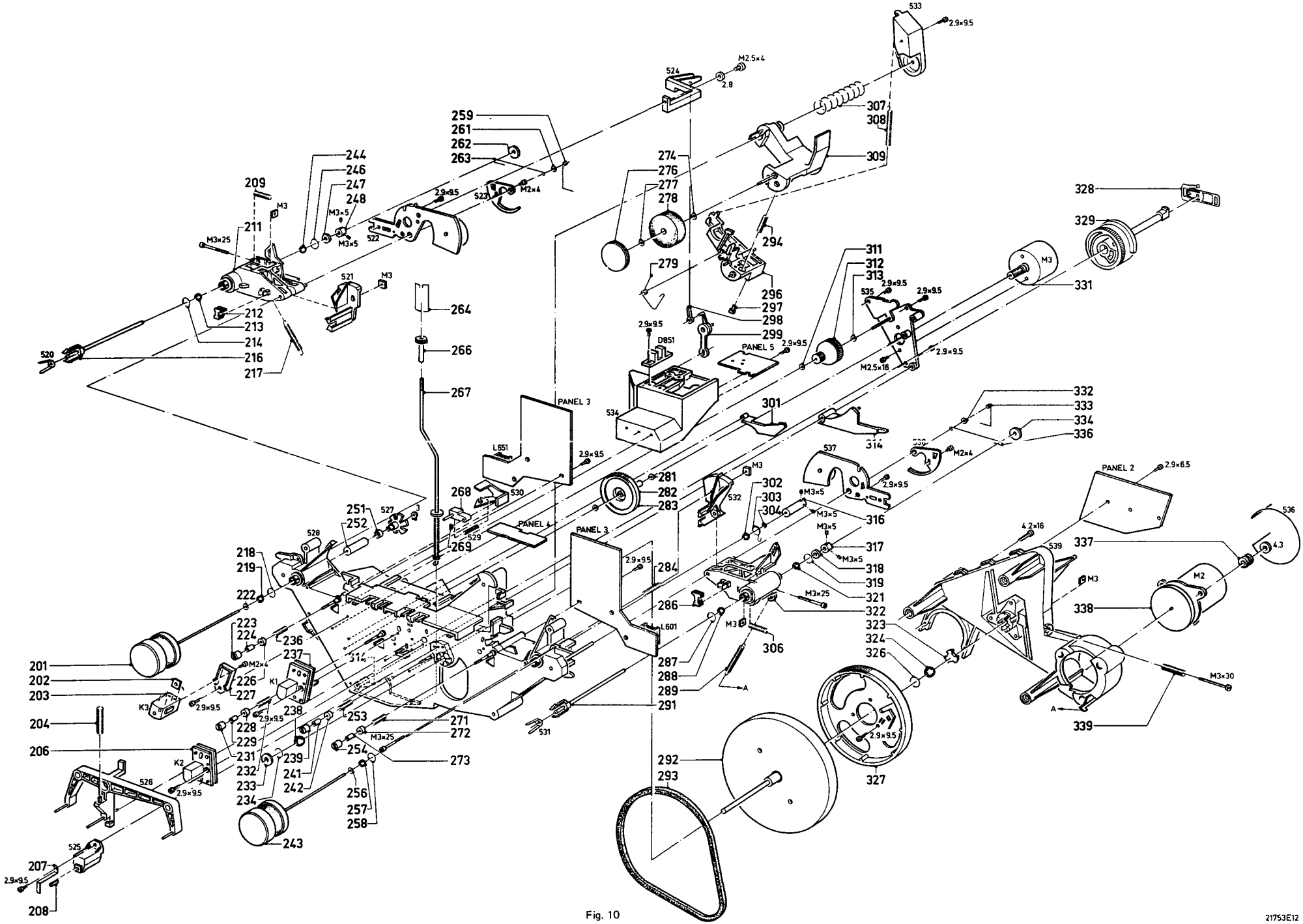


Fig. 9


533
2.9×9.5
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M2.5×4
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PANEL 3
PANEL 4
PANEL 5
L651
L601
D851
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K1
K2
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525
526
527
528
M3
M2
M2.5×16
M3×5
M3×25
M3×30
4.2×16
4.3
2.9×6.5

Fig. 10

MECHANICAL PARTS TAPE TRANSPORT

201	4822 528 80794
202	4822 466 90884
203	4822 249 40064
204	4822 492 51302
206	4822 249 20046
207	4822 492 31809
208	4822 535 70598
209	4822 492 51316
211	4822 403 20133
212	4822 462 40419
213	4822 520 10448
214	4822 492 31784
216	4822 535 91188
217	4822 492 31626
218	4822 492 31784
219	4822 520 10448
222	4822 310 40003
223	4822 505 10619
224	4822 532 20103
226	4822 532 10801
227	4822 443 30395
228	4822 532 10801
229	4822 532 20103
231	4822 505 10619
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279	4822 492 90018
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294	4822 492 51298
296	4822 403 40101
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301	4822 403 30309
302	4822 520 10448
303	4822 492 31783
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306	4822 492 51316
307	4822 492 51301
308	4822 492 31579
309	4822 403 40102
311	4822 532 50692
312	4822 522 31301
313	4822 532 50692
314	4822 403 10164
316	4822 532 20724
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319	4822 492 31784
321	4822 443 30407
322	4822 403 20133
323	4822 532 51119
324	4822 520 10432
326	4822 530 70288
327	4822 522 31308
328	4822 492 90016
329	4822 532 51123
331	4822 361 20177
332	4822 532 50296
333	4822 492 31786
334	4822 532 51188
336	4822 492 31785
337	4822 325 60038
338	4822 361 20185
339	4822 492 51299

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MECHANICAL PARTS CABINET

51	4822 532 51189
52	4822 532 20716
53	4822 492 51303
54	4822 532 20619
56	4822 502 11218
57	4822 528 20243
58	4822 325 80066
59	4822 492 31577
61	4822 532 60724
62	4822 403 40122
63	4822 403 10169
64	4822 492 31578
65	4822 492 51123
66	4822 532 51191
67	4822 532 20716
68	4822 492 51303
69	4822 532 20619
71	4822 502 11218
72	4822 443 30406
73	4822 502 30192
74	4822 502 30192
76	4822 454 20415
77	4822 492 61667
78	4822 492 61667
79	4822 528 80795
81	4822 413 51067
82	4822 492 61667
83	4822 413 40879
84	4822 413 40878
86	4822 413 40878
87	4822 413 40913
88	4822 460 20215 for /00/15
88	4822 460 20218 for /28
89	4822 403 51296
91	4822 403 51347
92	4822 502 11446
93	4822 528 80771
94	4822 361 20186
96	4822 522 31302
97	4822 358 30278
98	4822 403 10169
99	4822 410 22377
101	4822 349 50118
102	4822 410 30221
103	4822 520 10438
104	4822 361 20186
106	4822 522 31305
107	4822 325 60038
108	4822 255 40128
109	4822 255 40133
110	4822 492 62318
111	4822 381 10501
112	4822 464 50091
113	4822 532 60723
114	4822 464 50092
116	4822 381 10513
117	4822 381 10498
118	4822 411 50496
119	4822 492 61667
121	4822 443 30407
122	4822 492 31811
123	4822 502 11461
124	4822 505 10618
126	4822 532 51121
127	4822 492 51329
128	4822 520 10438
129	4822 505 10618
131	4822 502 11461
132	4822 532 51121
133	4822 492 51329
134	4822 290 40158
136	4822 321 10074 for /00/28
136	4822 321 10235 for /15
137	4822 460 20216
138	4822 146 20591
139	4822 462 40379
141	4822 492 31811
142	4822 276 10777
143	4822 410 30218
144	4822 462 40379
146	4822 347 20091
147	4822 381 10498
148	4822 410 30219
149	4822 462 40379
151	4822 460 20197
152	4822 443 30403

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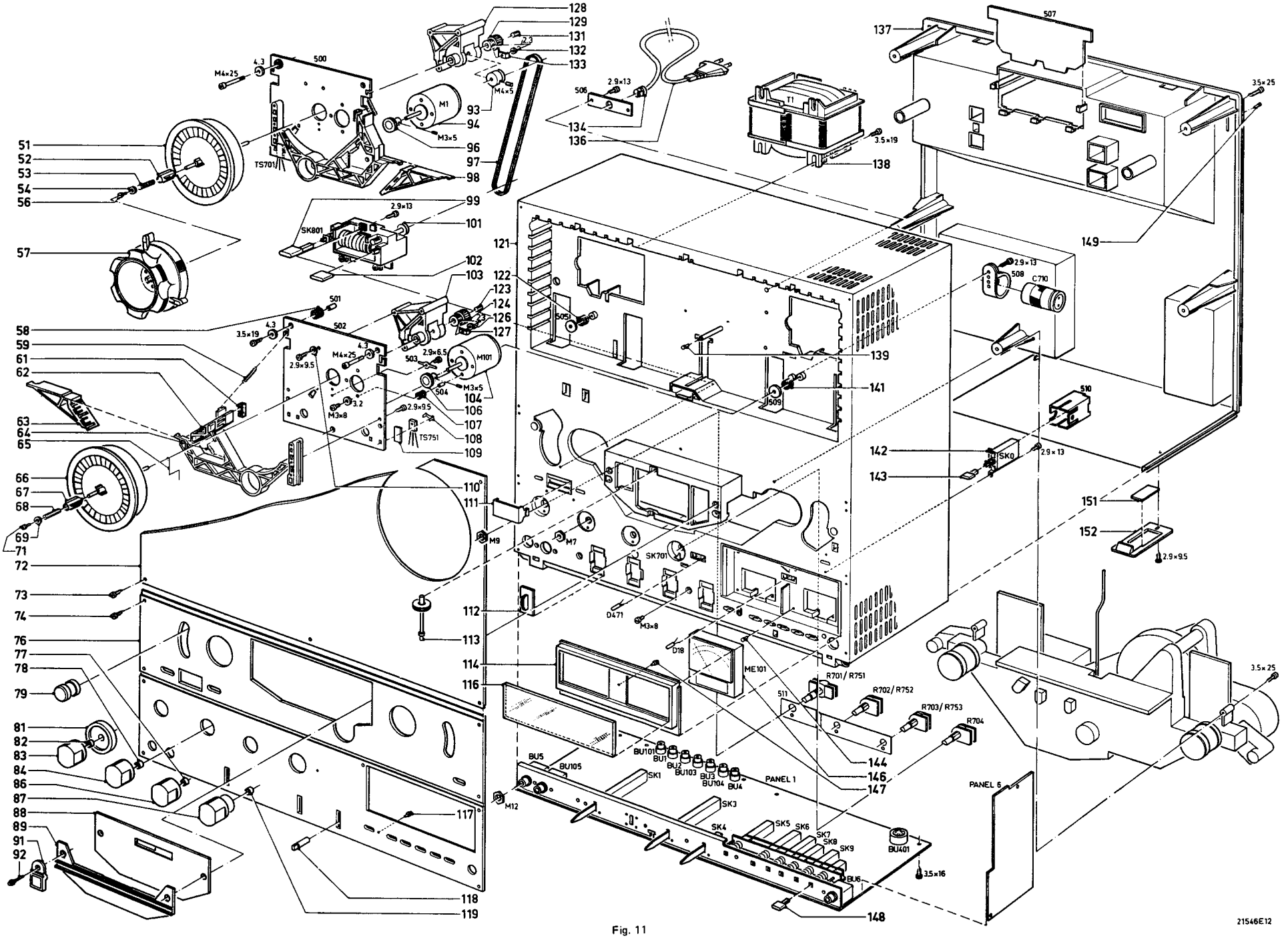
500
501
502
503
504
505
506
507
508
509
510
511
M1
M101
M7
M9
M12
T1
TS701
TS751
SK801
SK701
SK0
C710
D471
D18
ME101
BU101
BU1
BU2
BU3
BU4
BU5
BU105
BU103
BU104
BU401
SK1
SK3
SK4
SK5
SK6
SK7
SK8
SK9
BU6
PANEL 1
PANEL 6
R701/ R751
R702/ R752
R703/ R753
R704
M4×25
M3×5
M3×8
2.9×13
2.9×9.5
2.9×6.5
3.5×19
3.5×25
3.5×16
21546E12

Fig. 11

MISC	SK0	F1	T1	D4	F2	IC2	LA1	LA101	D908	TS910.TS905.TS13	D476
C			55.58	710	60					46	433.16.6.3076910.448
R						219	319			65.64.919.958.81.959.444	43.16.225.958

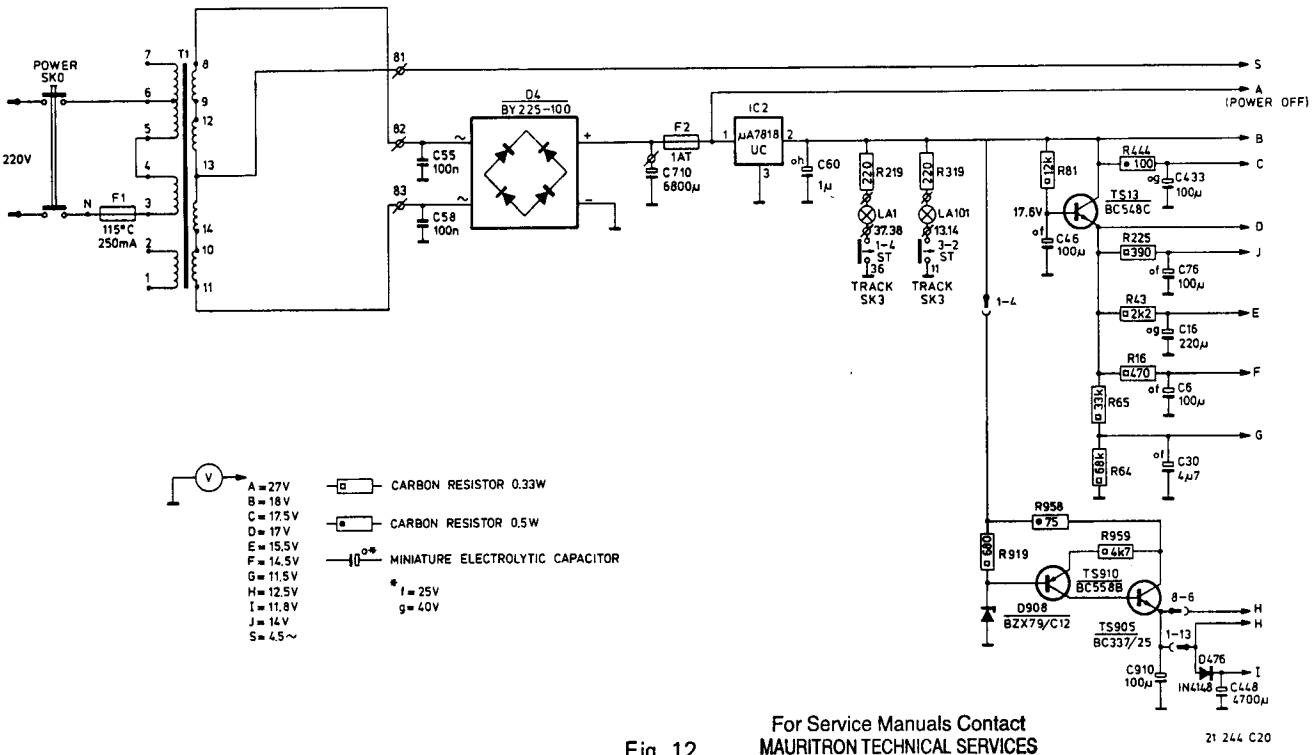

Fig. 12

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MISC	TS410.D471	D472.TS422.TS432.TS430	D478.D480	TS423	D460	TS424.D461.D462	D463	TS425	TS426	D501.502	M2.TS427
C	426	425 427	428.429.430	431		432 435	552		443		
R	484.485.818	486.487.833.834.837.443.488.817.835.491.489.490.815.704.836.816.492.820.821.493.494				495.496.801.804.802.805.803.806.556.557.499				553	551.552

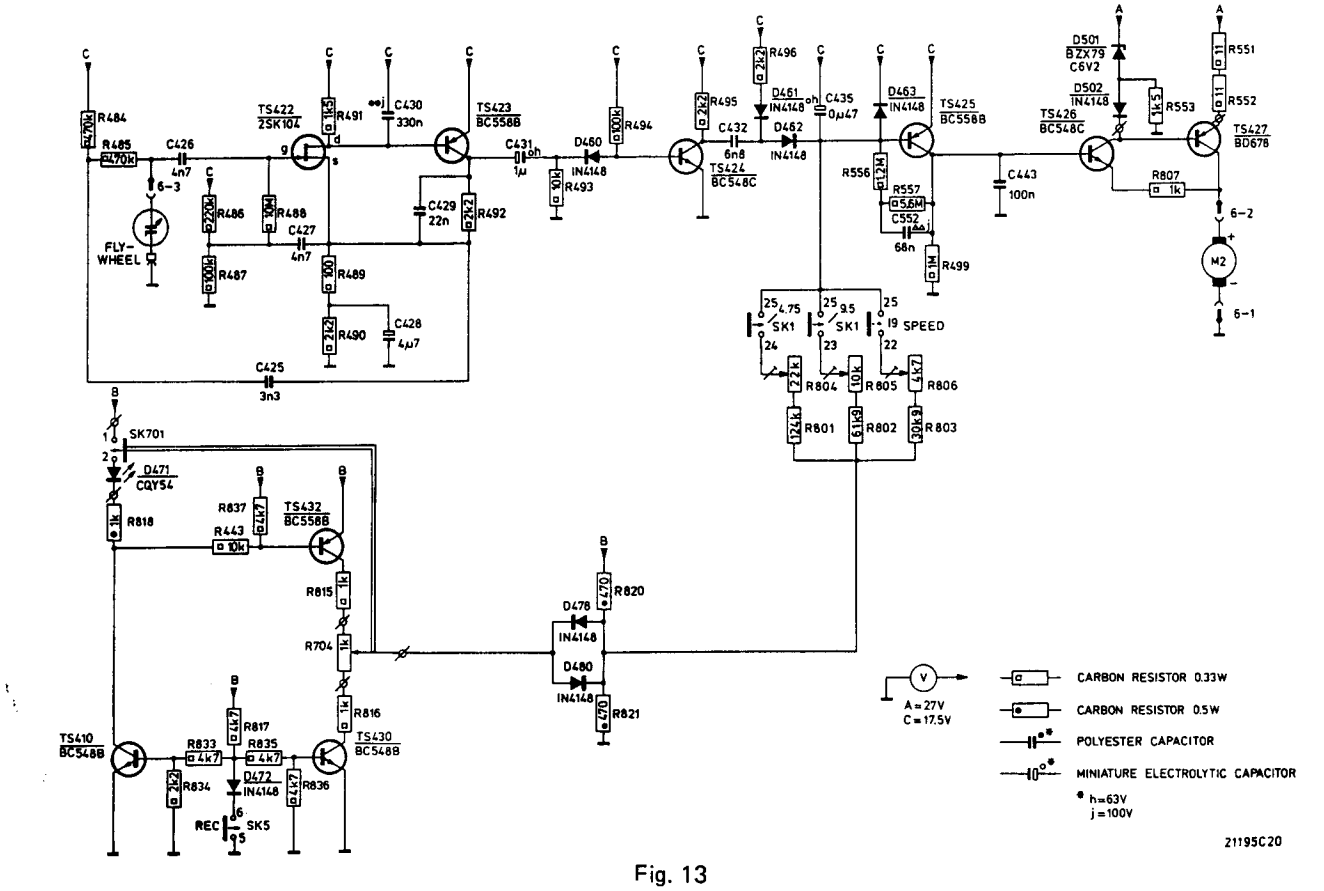

Fig. 13

| | | |

| | | |

MISC			IC903		IC902		TS906	TS413	TS701					TS421	TS431	TS420		TS414	IC903		TS415	IC902		TS907	TS751
	D450	D445÷D449			D909.D910				M1		D477			D553.D554.D456.D913		D915.D457	D458	D914.D474.D475.D451	D452÷D456	D441.D442			D911.D912			M101
C			929	914 925	913 911.919					711 449				553	928	422			420		926 421.918	917				712
R	481		470÷473	920.921	929 922÷925.927.930.928.484.955.954 485		926	462						479		822.823.480.966.466		467.824 482	825	468.469		474÷477.931.932	933.934.940.936.935.938.941	939	957 956	937

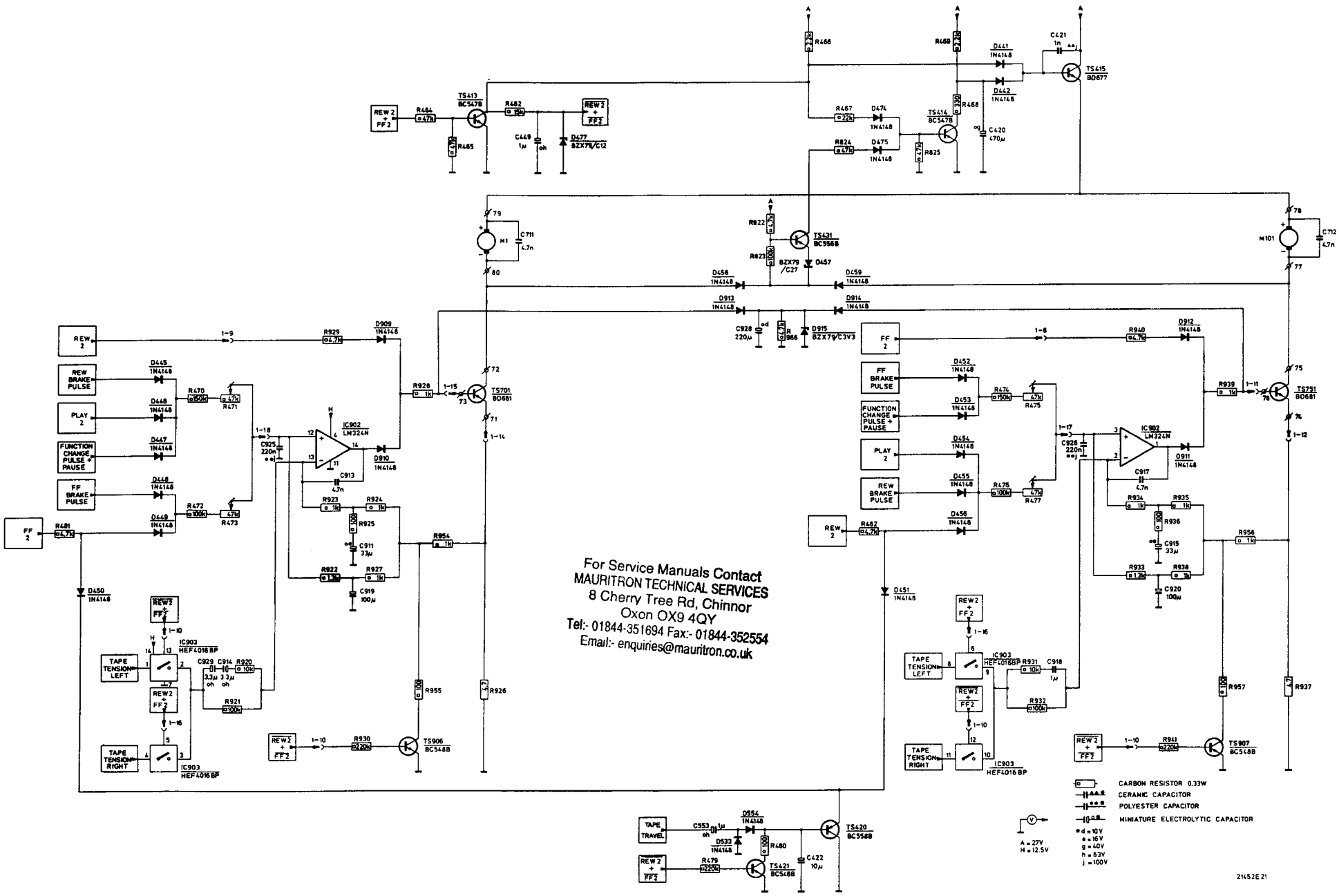

Fig. 16

| | | |

| | | |

| | | |

	K1								BU4 TS11		TS12	D9	ME1	IC1	D10	BU6
									BU104 TS111		TS112	D109	ME101			
67			44	45	70	41						42	43			
167			144	145	170	141						142	143			
	90	61	702	703	202	66	72-74	208	209	67	69	68	75	70	71	76	78	79	80	77	
	190	161	752	753	302	166	172-174	308	309	167	169	168	175	170	171	176	178			177	

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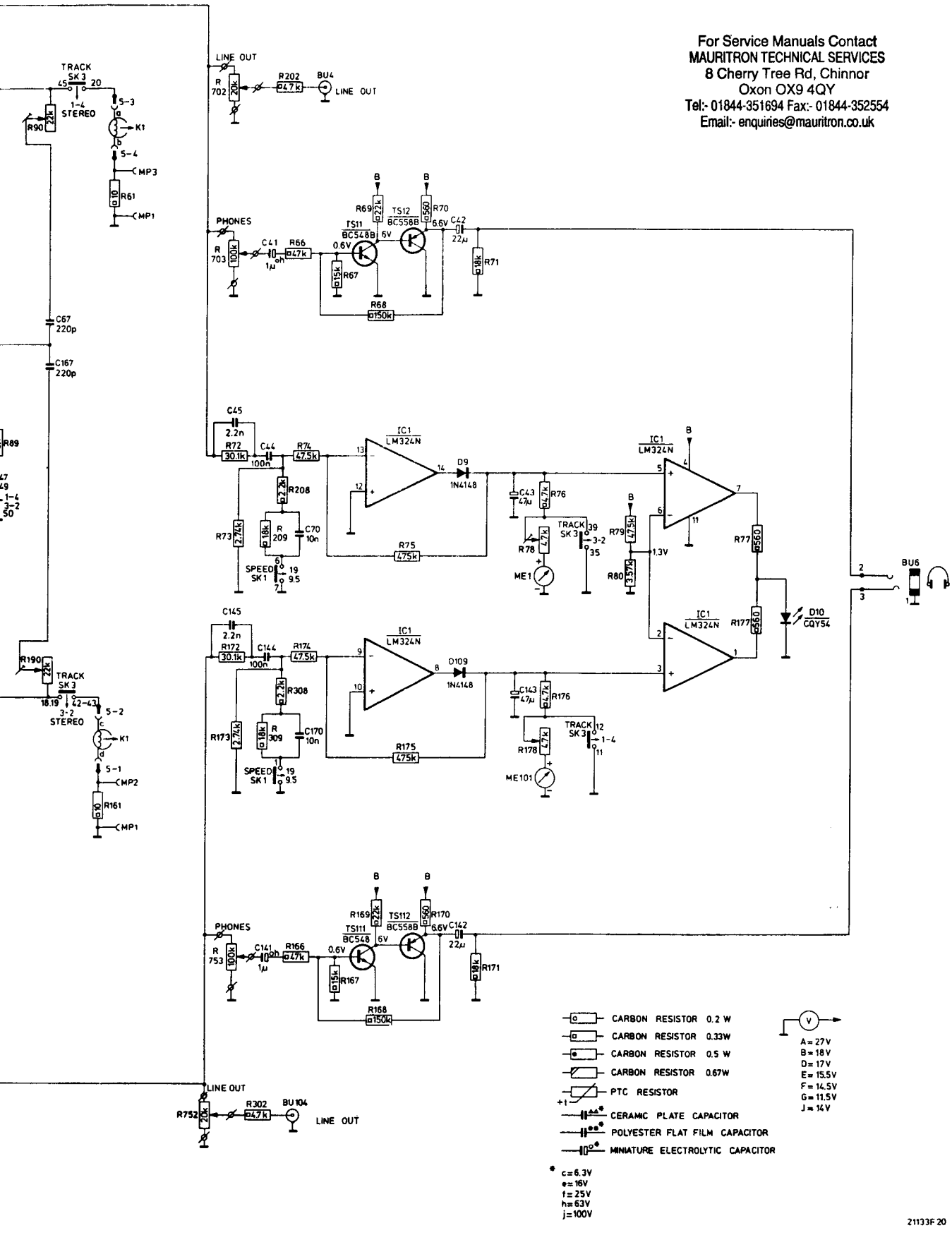

MISC.	ME101.LA101 TS421 TS401 TS420..TS402 IC401 IC402 D10 TS403–TS406 IC403 TS407–TS409 IC404 TS411–TS414 ME1 LA1 D701 RE401 TS410 IC2.TS430.TS431 R704 IC1 SK701 TS427 D4 TS415 TS112 TS111 TS
C	438 401–405 416 415 419 407 406 417 60 43–45 143–145
	437 422 553 423 424 411 409 447 449 446 412 410 413 414 418 448 55 70 170 58 420 421 51
D	469 464÷467 470 411 401 402 412 410 409 403 414 468 417 406 420 405 436 435 408 431 476 477 419 441 415 418 479 407 439 440 472 427
	553 554 428–430 421 425 424 404 426 456 453–455 433 443–452 413 416 432 475 474 423 438 437 422 457 459 458 480 478 434 9 109 442
R	809 808 413 422 832 424 423 402 420 419 421 408 409 433 434 446 447 407 440 404 445 406 405 451 454 452 213 219 319 417 453 207 307 72 209 208 308 173 309 19
	480 478 401 814 479 435 436 412 411 481 71 171 442 830 428 432 415 474 416 431 418 448 449 471 417 462 473 417 439 477 475 437 438 817 818 443 833–837 816 178 78 61 161 73 74–80 469 449 170 166–168
	414 482 403 476 481 410 460 461 425÷431 825–829 472 470 441 464–468 457 456 458 459 824 822 823 831 815 821 820 455 89 173–177 169 557 556

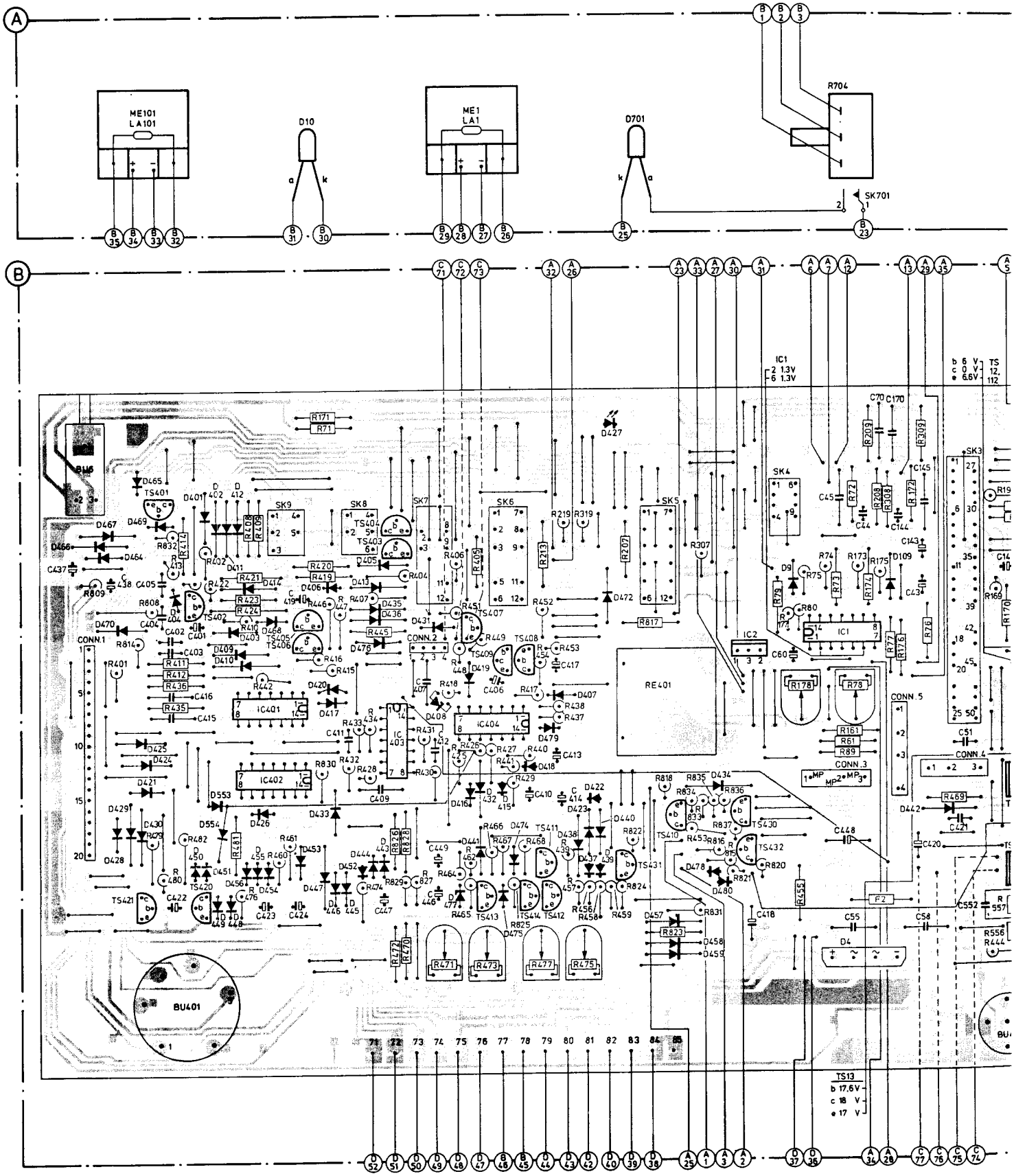

Fig. 18

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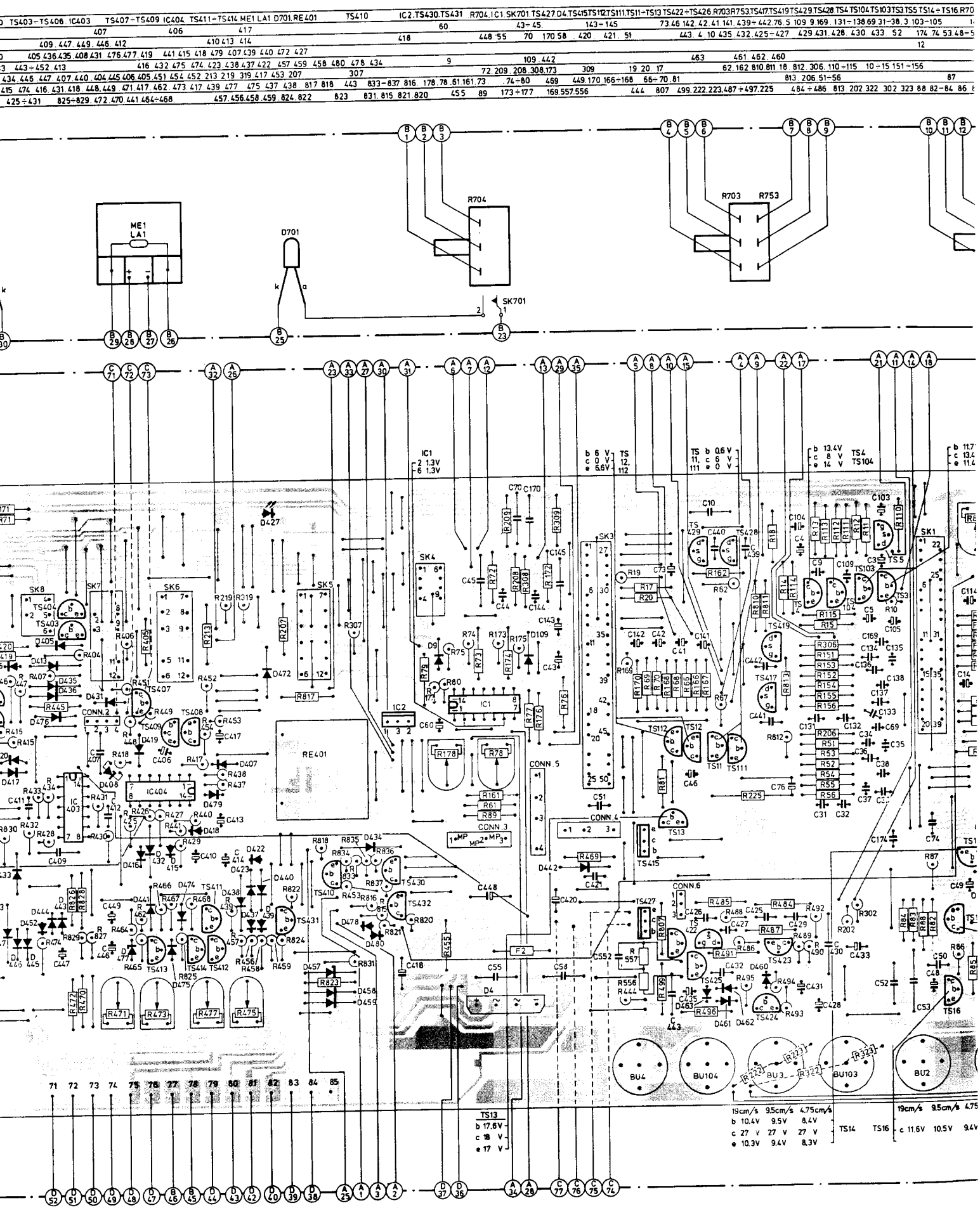
ME1
LA1
D701
R704
R703
R753
SK701
IC1
IC2
RE401
SK1
SK3
SK4
SK5
SK6
SK7
SK8
CONN.2
CONN.3
CONN.4
CONN.5
CONN.6
BU4
BU104
BU3
BU103
BU2
TS13
TS14
TS16

Fig. 18

| | | |

MISC	L901 IC901 IC903 IC902 M101 PLUG 1 CONN. 8 SK0 M1 T1 F1
C	903 901.928 922 921 904÷908 927 902 710
	929 919 911 926 925 914 913 712 910 917 918 920 915 924 711
D	903 923 921 906÷910 916 902 901 912÷915 911 904 905 922 919 917 920
R	963 901÷909 943÷945 964 965 932÷934 917 946 915 952 912 914 910 966 962
	955 913 916 911 920÷930 918 948 954 947 931 935÷942 956÷961 919 949÷951
TS	906 911 751 910 905 908 901÷904 909 907 701

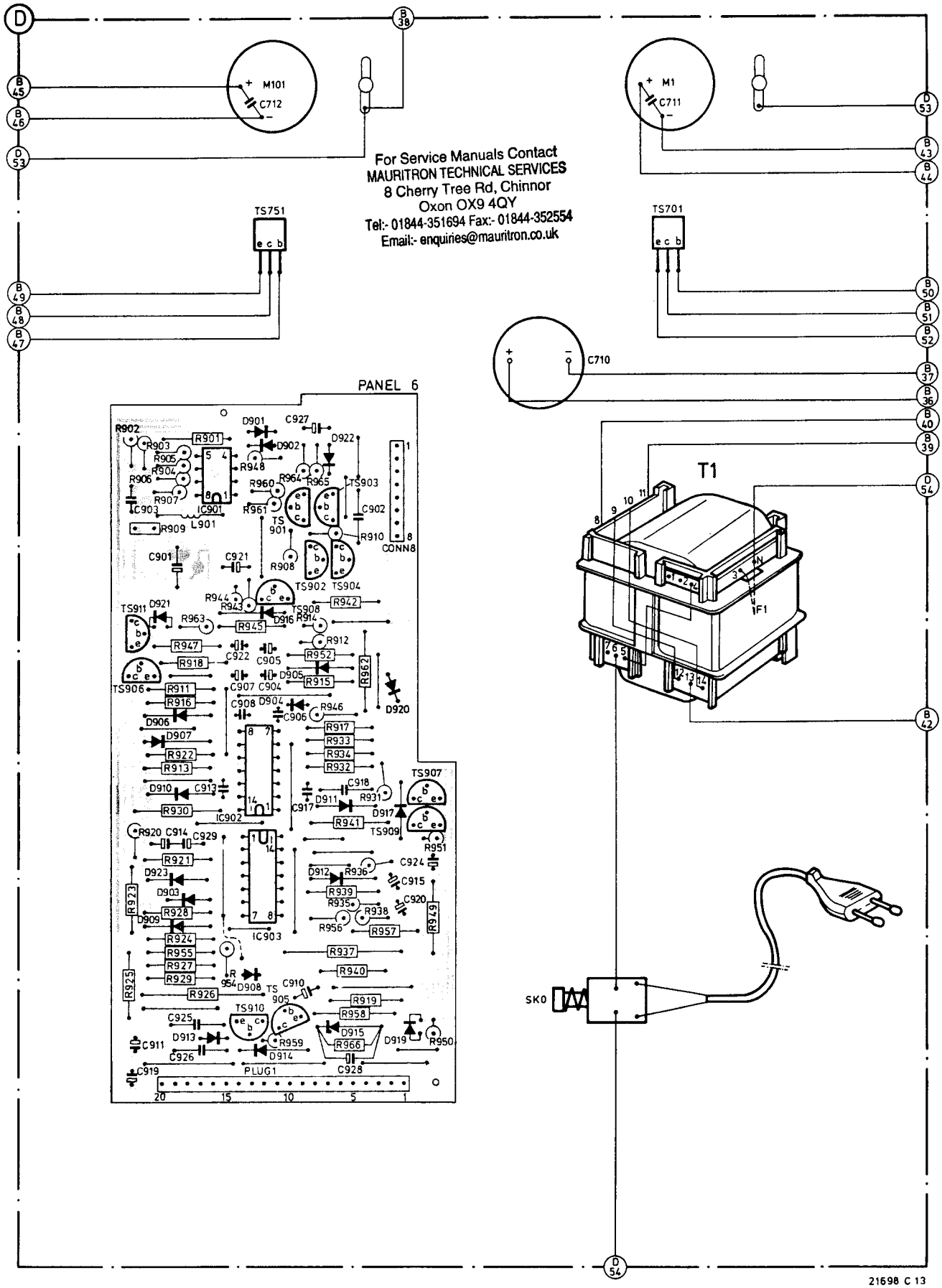

Fig. 19

MISC.	PLUG6	L601	M2	PLUG5	TS601	D601	K2	PLUG7	D501	K1	PLUG 8
C					601-605				501		
R				603	602	601			501-510 511		

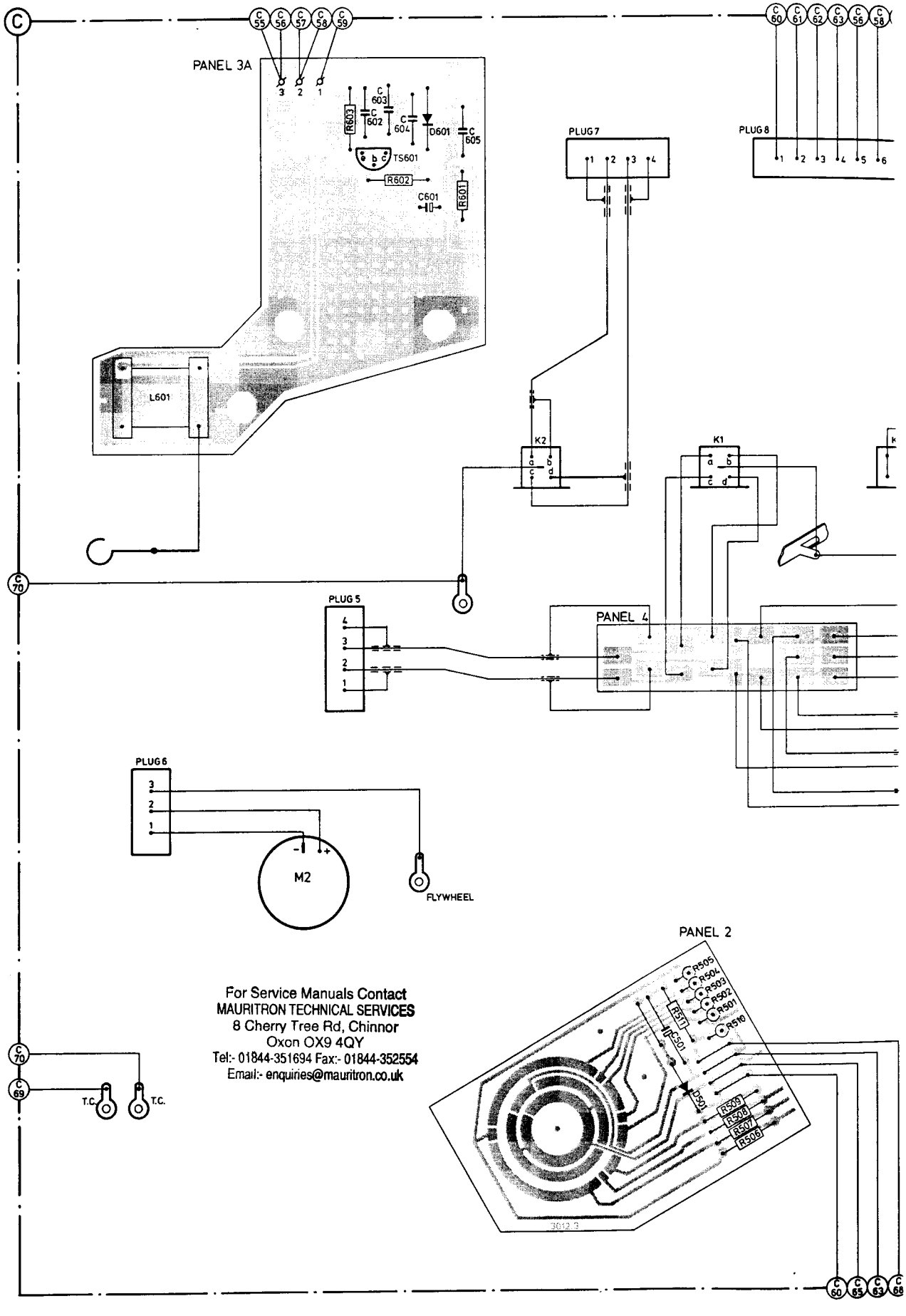

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Fig

M2	PLUG5	TS601	D601	K2	PLUG7	D501	K1	PLUG 8	K3	M3.PLUG 4.PLUG 2.D551.D552
		601-605				501				551
	603	602	601			501-510.511				553.554.552.551.555

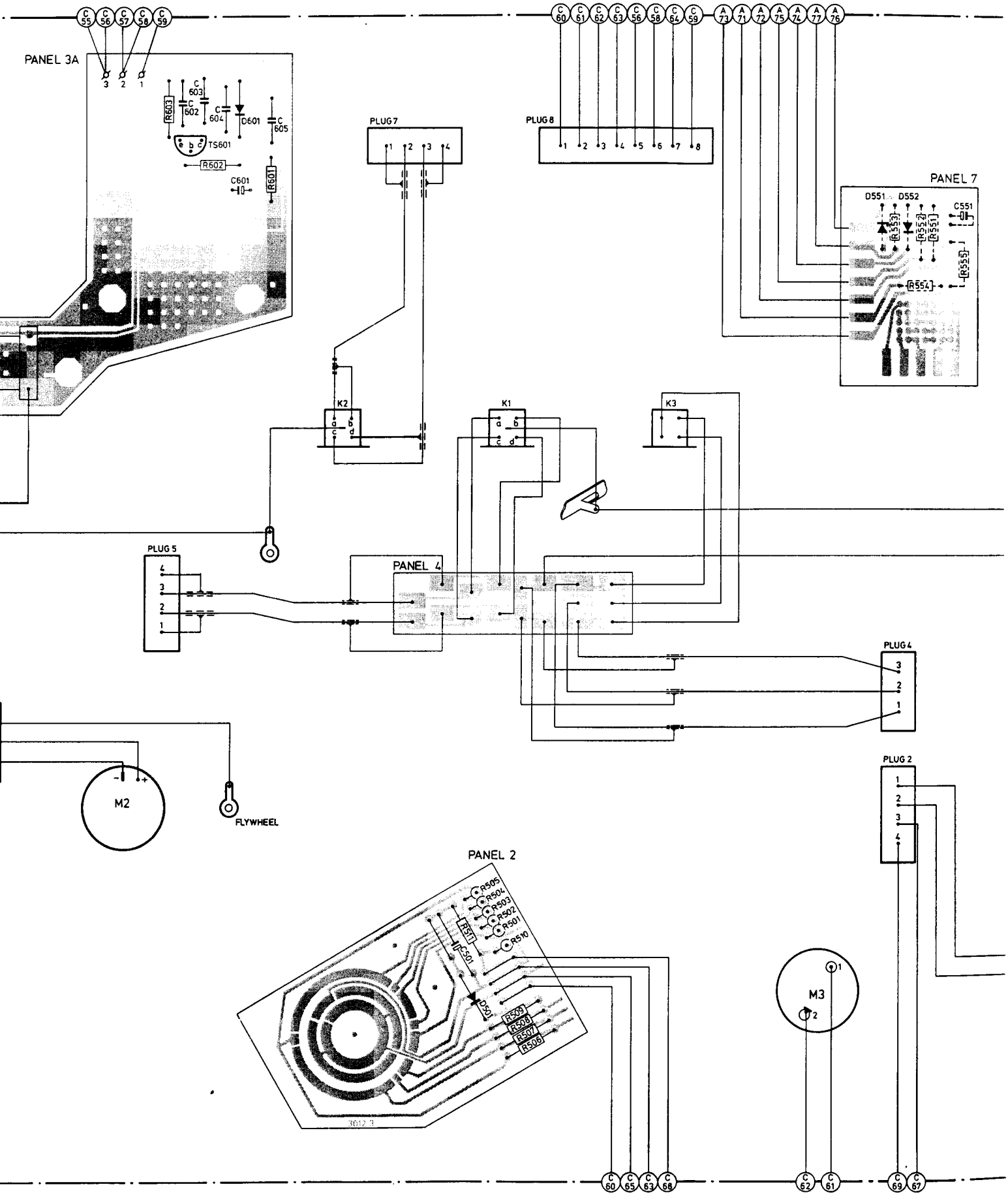

Fig. 20

K3	M3. PLUG 4. PLUG 2. D551. D552	D651	TS651. TS852. D/TS851. CONN. 9	SK801	L651. PLUG 9	SK802	MISC
	551	651-655					C
	553. 554. 552. 551. 555	651-653. 851-853					R

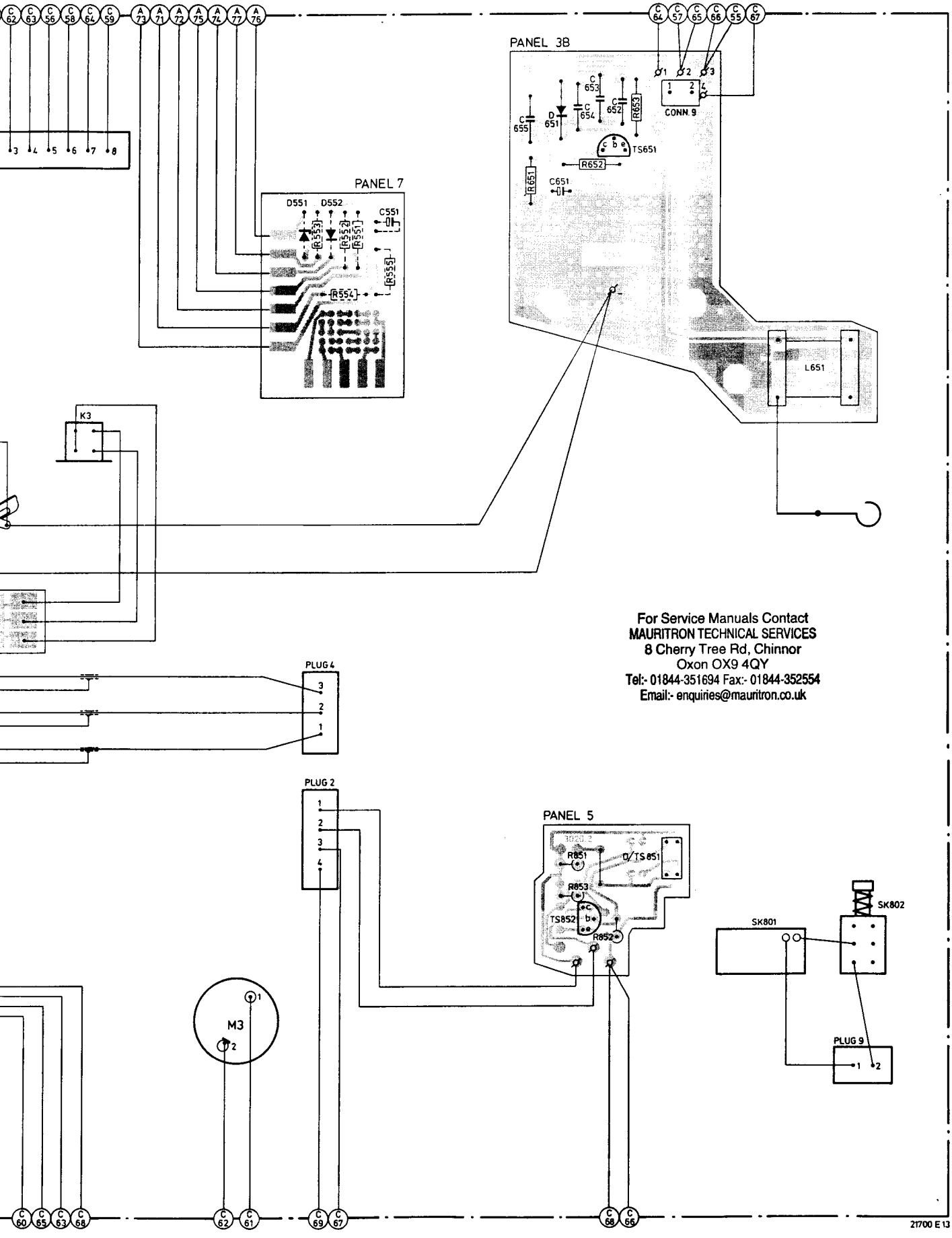

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Fig. 20

MISC.	BU5	BU105	BU101	BU1	BU2.SK1	BU103	BU3	BU104	BU4	SK3
	TS1.TS2. TS101.TS102	TS6.TS106.L101.L1 TS9.TS109 TS110.TS10	TS107.TS108.TS7.TS8		TS14.TS15.TS16 TS5.TS3	TS103.TS104.TS4.TS428.TS429.TS419.TS417.TS422 – TS426 TS11 – TS13 TS111.TS112.TS427.D4.TS4				
C	8.71.102 2	1711.111.117.139 120.115.68.19 112.119.113.16.118.13.18.172	72.121 – 125.21 – 25	114.14	103 – 105.3.31 – 38.69.131 – 138 169.9.109.5.76.439 – 442 141.41.42.142.46.73.552	143 – 145 170				
D	1.6 101.171 108.127	128.27.39 168.12 28 – 30 129.26.126.20.15	40.140 67.167	48 – 50.53.74.174	52.433.430.428.431.429	425 – 427.432.435.10.4.443			51.421 420	58
R	220.214.218 102	121 – 131.43.142 321.217.216.141.221.310.311.801 ÷ 806.132 ÷ 140			151 – 156.10 – 15 110 – 115.306.812	18.811.810.162.62		460.462.461 463	17.20 19.169 309	44.
	1 ÷ 3.5 ÷ 9 108.109.103	158.21 ÷ 26 44 ÷ 49 27 ÷ 30.31 41.144 – 146 32 ÷ 40.210.211.190.90		87	323.322.223.222 51 ÷ 56.206.427.225				81.66 – 70 166 ÷ 170	469
	105 107.106.101.16	148.147.58.149 63 ÷ 65 42	163.157.57.59.159.60.160.215.85.86.82 – 84.88	302	202.813.484 – 486.487.488 – 496	499.807 444.556.557				

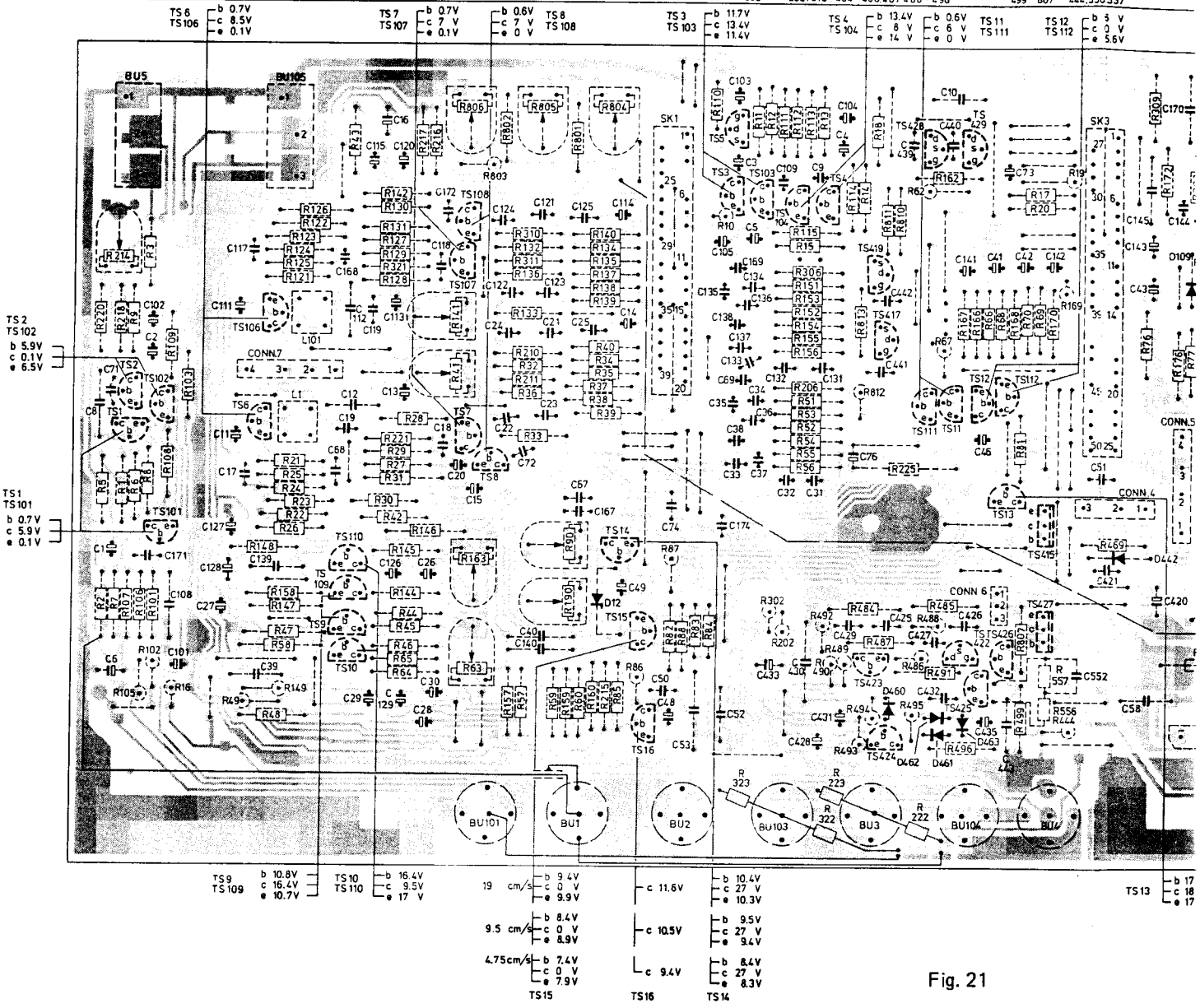
TS 6 TS106 b 0.7V c 8.5V e 0.1V
TS 7 TS107 b 0.7V c 7 V e 0.1V
TS 8 TS 108 b 0.6V c 7 V e 0 V
TS 3 TS 103 b 11.7V c 13.4V e 11.4V
TS 4 TS 104 b 13.4V c 8 V e 14 V
TS 11 TS 111 b 0.6V c 6 V e 0 V
TS 12 TS 112 b 5 V c 0 V e 5.6V
TS 2 TS 102 b 5.9V c 0.1V e 6.5V
TS 1 TS 101 b 0.7V c 5.9V e 0.1V
TS 9 TS 109 b 10.8V c 16.4V e 10.7V
TS 10 TS 110 b 16.4V c 9.5V e 17 V
19 cm/s b 9.4V c 0 V e 9.9V
9.5 cm/s b 8.4V c 0 V e 8.9V
4.75cm/s b 7.4V c 0 V e 7.9V
TS15
c 11.6V
c 10.5V
c 9.4V
TS16
b 10.4V c 27 V e 10.3V
b 9.5V c 27 V e 9.4V
b 8.4V c 27 V e 8.3V
TS14
TS 13 b 17 c 18 e 17
BU5
BU105
BU101
BU1
BU2
BU103
BU3
BU104
BU4
SK1
SK3
CONN.7
CONN.4
CONN.5
CONN 6

Fig. 21

R	506.507.508.509	510.501.502.503.504.505.511
MISC.	D501	C501

PANEL 2

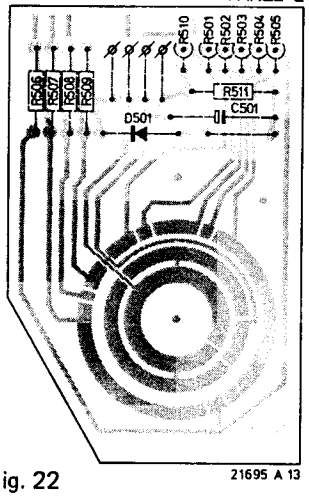

Fig. 22

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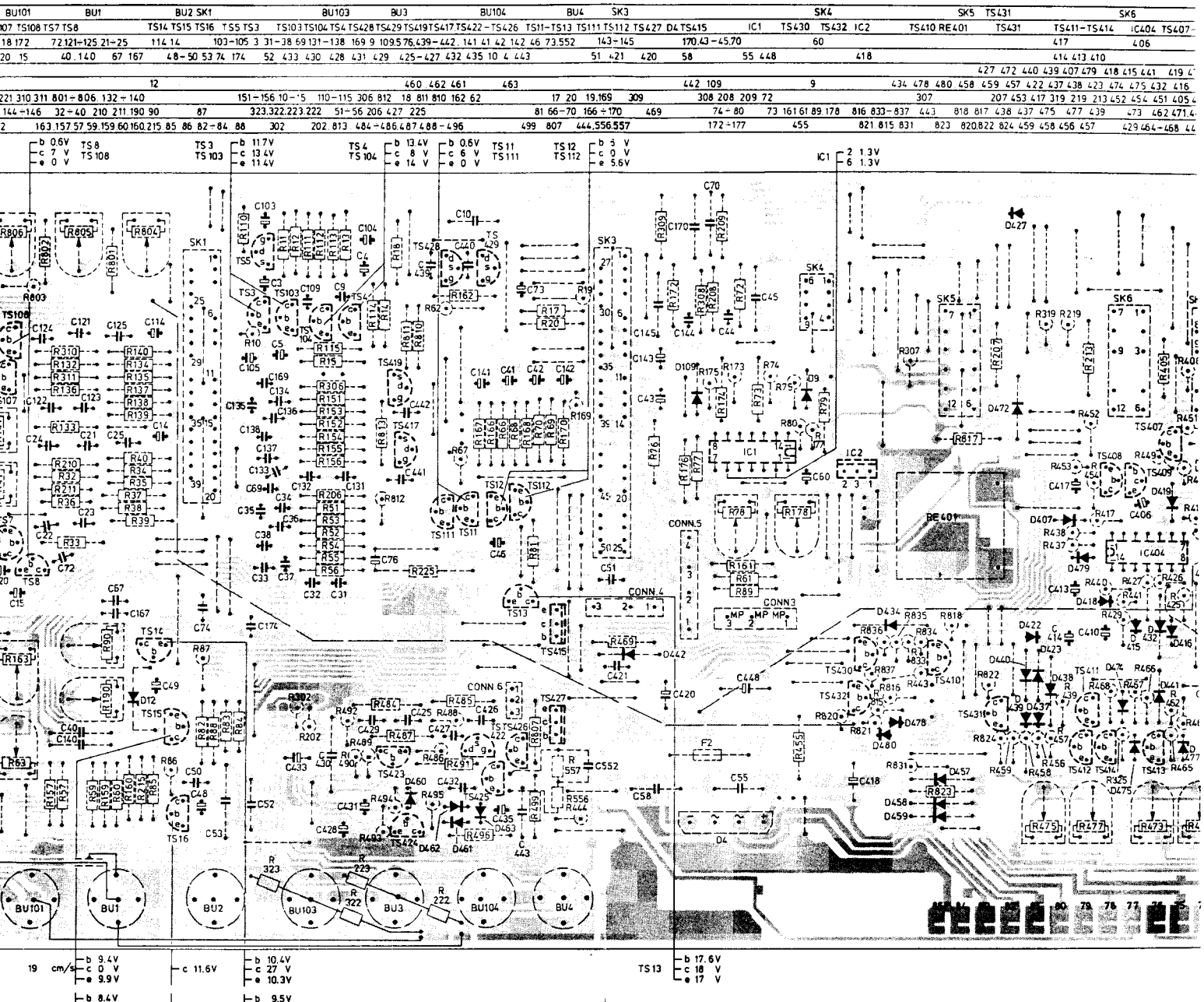
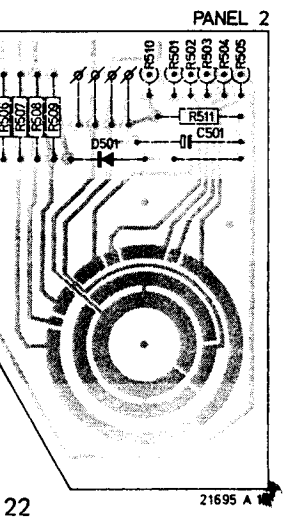


Fig. 21

MISC	D601	TS601	L601
C	605	601.604.603.602	
R	601	602	603



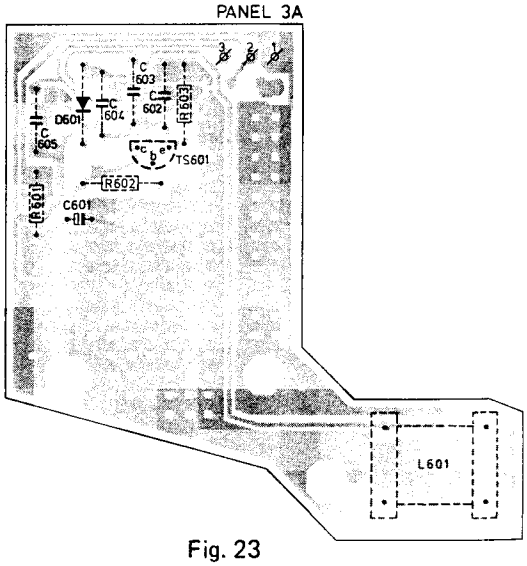
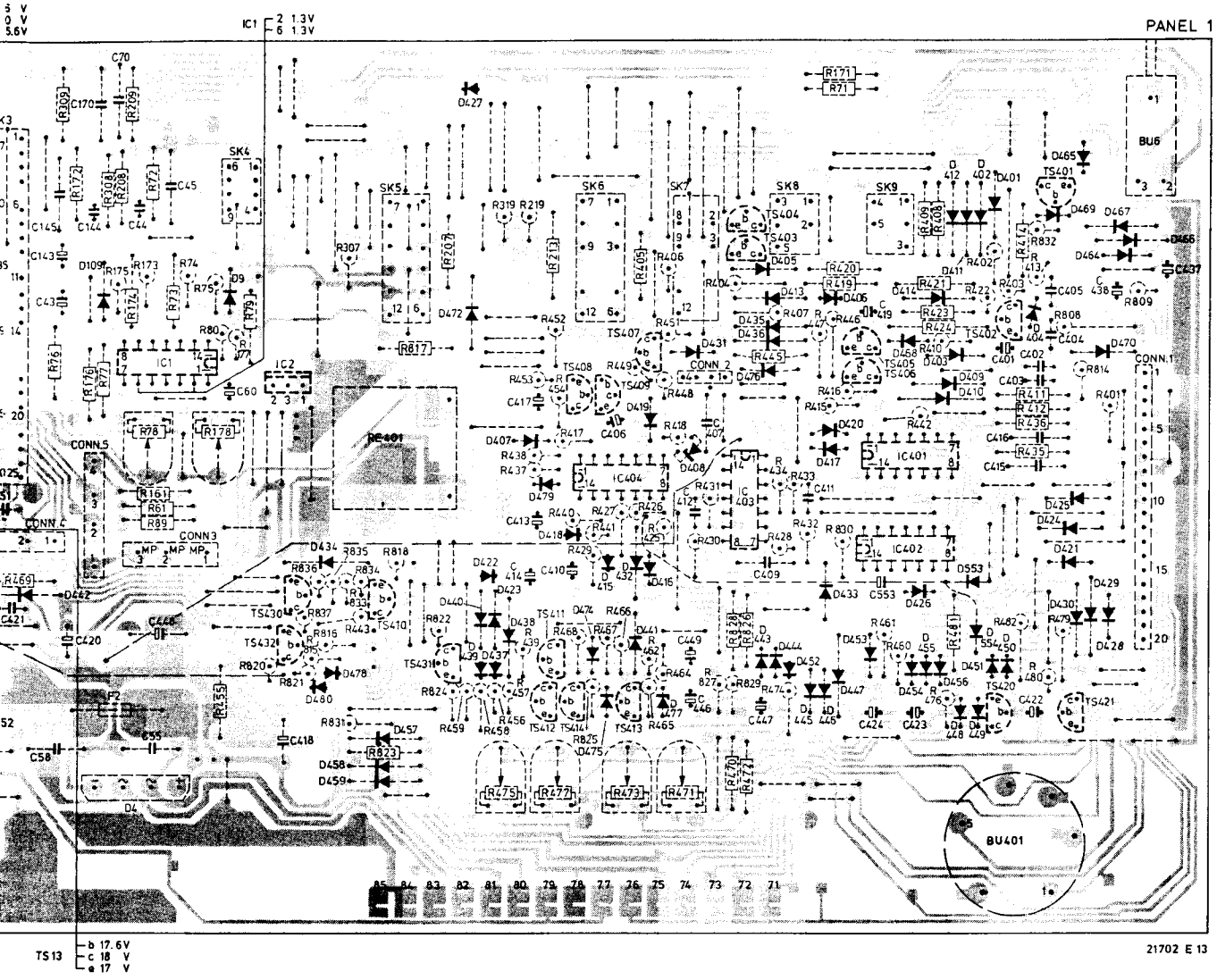


Fig. 23

SK3	SK4	SK5	TS431	SK6	SK7	SK8	SK9	BU6	MISC.
TS112 TS427 D4 TS415	IC1 TS430 TS432 IC2	TS410.RE401	TS431	TS411-TS414	IC404 TS407-TS409	IC403 TS403-TS406	IC402 IC401	TS402 TS420 TS401 TS421	
3-145	170.43-45.70	60		417	406	407	419 553	415 416 401-405 438	C
421 420 58	55 448	418		414 413 410		412 446 449 447 409 411	424 423	422 437	
				427 472 440 439 407 479 418 415 441	419 477 476 431 408 435 436 405		420 406 417 468 414 403 409 410 412 402 401 411 470 464-467 469		D
442 109	9	434 478 480 458 459 457 422 437 438 423 474 475 432 416				413 443-451 433	452-456 553 426 404 424 425 554 421 428-430		
S 309	308 208 209 72	307	207 453 417 319 219 213 452 454 451 405 406 445 404 440 407 447 446 434 433 409 408 421 419 420 402 423 424 832 422					413 808 809	R
170 469	74-80	73 161 61 89 178	816 833-837 443	818 817 438 437 475 477 439	473 462 471 448 449 451	418 431 416 474 415 432 428 830 442	171 71 481 411 412 436 435 479 814 401 478 480		
6 557	172-177	455	821 815 831	823 820 822 824 459 458 456 457	429 464-468 441 470 472	430 825+829 425+427 461 460	476 476 478 403 482 414		



MISC.	D601	TS601	L601	L651	CONN9	TS651	D651
C	605	601.604.603.602					652.653.654.651.655
R	601	602 603				653	652 651

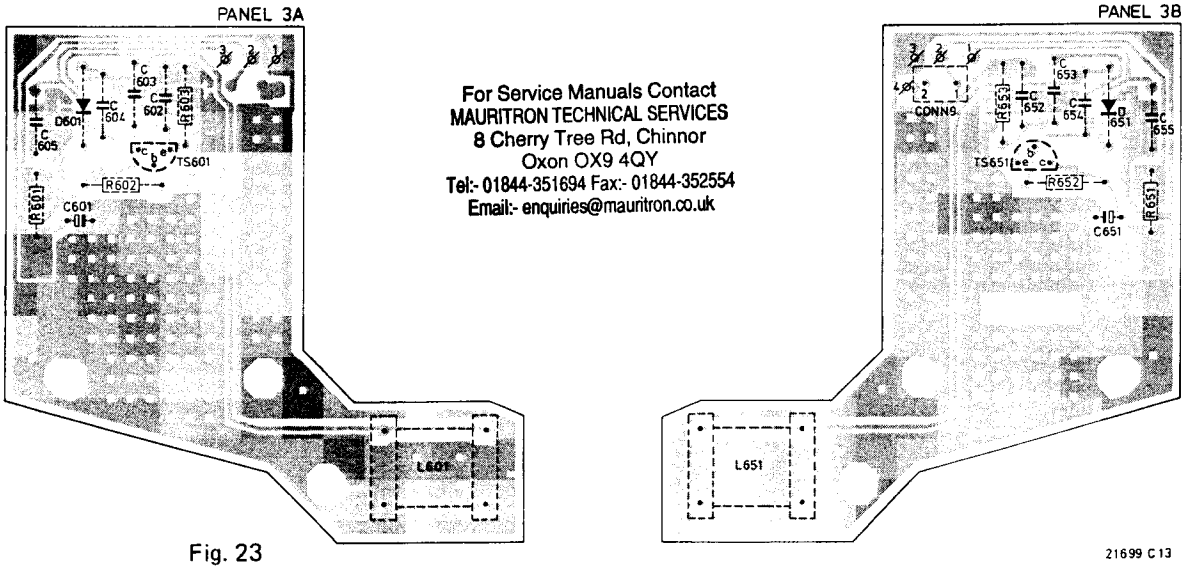


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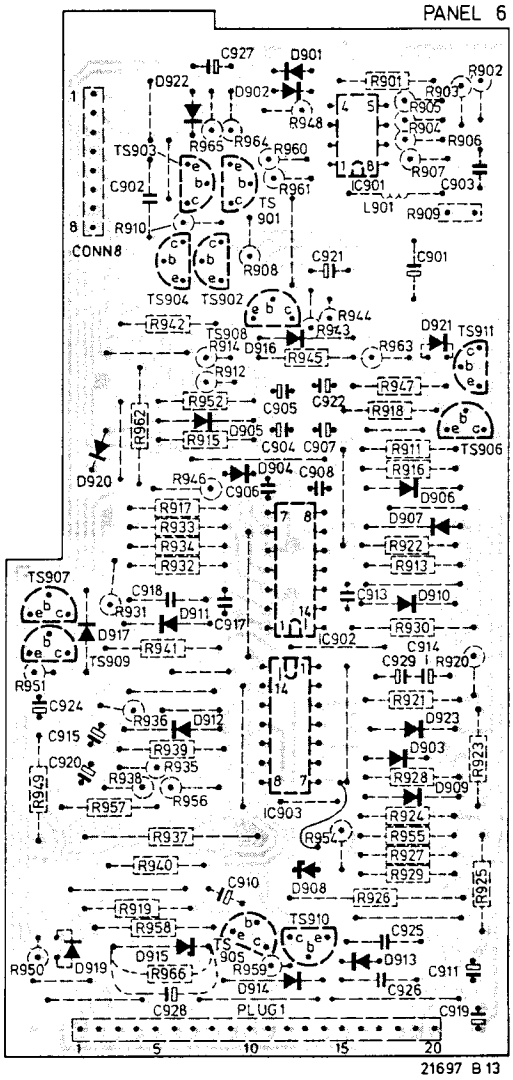
Fig. 23

21699 C 13

MISC.	IC902 IC903 IC901 L901
C	902 927 904-908 921 922 901 903
	924 915 920 918 928 917 910 913 914 925 926 911 919 929
D	920 917 919 922 905 904 911 912-915 901 902 916 906-910 921 923 903
R	962 966 910 914 912 952 915 946 917 932-934 965 964 943-945 901-909 963
	949-951 919 956-961 935-942 931 948 947 954 955 918 920-930 911 916 913
TS	907 909 901-904 908 905 910 911 906

PANEL 6



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8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauritron.co.uk

Fig. 24

R	852	851 853
MISC.	D/TS851	TS852

PANEL 5

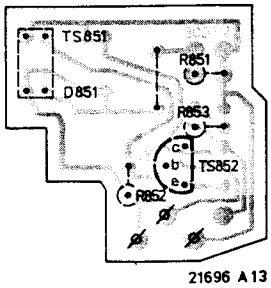

Fig. 25

D	551	552
C		551
R	553.554.552.551.555	

PANEL 7

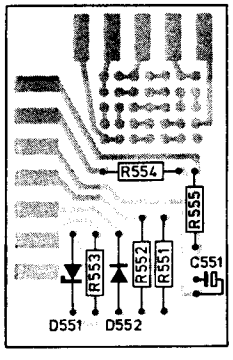

Fig. 26

ELECTRICAL PARTS LIST

-C-

1-4-11-13-14-15-73-101-104-111-113-114-115-423-424-428-927	4μ7	35 V	4822 124 40313
8-17-18-74-108-117-118-174	180 p	50 V	4822 122 31474
9-109	22 p	50 V	4822 122 31463
10-409-410	22 n	250 V	4822 121 40407
19-67-119-167	220 p	50 V	4822 122 10172
21-121	6.2 n	63 V	4822 121 50633
22-122	5.6 n	63 V	4822 121 50543
23-123	6.8 n	63 V	4822 121 50538
24-124	82 n	50 V	4822 122 40208
25-125	270 p	50 V	4822 122 31465
27-29-42-49-127-129-142-446-447-501	22 μ	16 V	4822 124 40312
31-131	1.5 n	50 V	4822 122 31464
32-132	330 p	50 V	4822 122 10163
33-133	470 p	50 V	4822 122 31355
34-134	1.4 n	125 V	4822 121 50768
35-40-45-135-140-145	2.2 n	50 V	4822 122 10164
36-136	1 n	250 V	4822 121 50566
37-137	4.7 n	63 V	4822 121 50738
38-138	6.8 n	50 V	4822 122 40206
39-139	56 n	100 V	4822 121 41154
43-143	47 μ	15 V	4822 124 40311
44-144	100 n	50 V	4822 122 31433
50	11 n	63 V	5322 121 54147
51	8.2 n	63 V	5322 121 54151
52	39 n	250 V	4822 121 40413
55-58-415-416-443-605-655-902	100 n	100 V	4822 121 41161
68-168-426-427-711-712-913-917	4.7 n	50 V	4822 122 10176
69-169	5.6 n	50 V	4822 122 40169
70-170	10 n	25 V	4822 122 10177
71-171	10 p	63 V	4822 122 31526
72-172	27 p	50 V	4822 122 31472
411-412	1 n	50 V	4822 122 31356
413-414-422-438-922	10 μ	16 V	4822 124 40309
425	3.3 n	50 V	4822 122 10156
429	22 n	25 V	4822 122 10188
432	6.8 n	63 V	4822 121 50538
448	4700 μ	16 V	4822 124 40317
601-651	47 μ	16 V	4822 124 40311
602-652	15 n	250 V	4822 121 40406
604-654	4.7 n	250 V	4822 121 40239
710	6800 μ		4822 124 40346
905-907-918	1 μ		4822 121 50718
906-908	1 n	100 V	4822 122 31175
910	100 μ	16 V	4822 124 40194
919-920	100 μ	6.3 V	4822 124 20462
921	0.47 μ	50 V	4822 124 20719

-D-

BY225-100	4822 130 30917
BZX75/C2V1	4822 130 34049
BZX79/C3V3	5322 130 30392
BZX79/C6V2	4822 130 34167
BZX79/C12	4822 130 34197
BZX79/C27	4822 130 34379
CQY54	4822 130 30914
D/TS851	4822 256 90244
IN4002	5322 130 30684
IN4148	4822 130 30621

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-IC-

HEF4001BC	4822 209 10112
HEF4011BC	4822 209 10113
HEF4016BP	5322 209 14119
HEF4081BC	4822 209 10111
LM324N	5322 209 85899
NE532V	4822 209 80484
μA7818UC	4822 209 80404

-L-

1-101	4822 157 50735
601-651	4822 157 51129
901	4822 157 50975

-R-

2-47-102-147-422	10 K	4822 116 51253
14-114	39K2	5322 116 54664
15-115	1 K	5322 116 54549
26-72-126-172	30K1	4822 116 54655
33-133	681 K	5322 116 55248
34-134	8K25	5322 116 54558
36-136	12K7	5322 116 50443
37-137	1K33	5322 116 54561
38-138	3K01	5322 116 50524
41-90-141-190-804	22 K	4822 100 10051
58-74-79-158-174	47K5	4822 116 51117
63-163-214-471-473-475	47 K	4822 100 10079
73-173	2K74	5322 116 50636
75-175	475 K	4822 116 51275
78-178-806	4K7	4822 100 10036
80	3K57	5322 116 54586
219-319	220 Ω	5322 116 55062
222-322	301 K	5322 116 54743
419	9K09	5322 116 55277
420	3K92	5322 116 54591
421	1K91	5322 116 54569
423-424	6K04	5322 116 54601
501	49K9	5322 116 50674

-R-			
502		16K5	5322 116 54634
503		8K25	5322 116 54558
504		4K99	5322 116 50523
505		3K32	5322 116 54005
506		2K37	5322 116 54576
507		1K78	5322 116 50515
508		1K40	5322 116 54562
509		1K10	5322 116 54554
701-751		20 K	4822 102 30327
702-752		20 K	4822 102 30328
703-753		100 K	4822 102 30329
704		1 K	4822 102 30336
801		124 K	5322 116 54705
802		61K9	5322 116 50872
803		30K9	5322 116 54656
805		10 K	4822 100 10035
909	PTC	25-50 Ω	4822 116 40001
926-937		4.7 Ω	4822 113 80224

-TS-	
BC327-25	4822 130 41246
BC337-25	4822 130 40981
BC547B	4822 130 40959
BC548B	4822 130 40937
BC548C	4822 130 44196
BC549B	4822 130 40936
BC550C	4822 130 41096
BC556B	4822 130 41618
BC558B	4822 130 44197
BC637	4822 130 41041
BD677	4822 130 41484
BD678	4822 130 41451
BD681	5322 130 44786
2SK104H	4822 130 41552

-Miscellaneous-		
BU1, BU2, BU3, BU4 BU101, BU103, BU104		4822 267 10061
BU5, BU105		4822 267 30345
BU6		4822 267 30346
BU401		4822 267 40233
Conn. 1		4822 265 40147
Conn. 2		4822 266 30138
Conn. 3 + 4		4822 265 30149
Conn. 5 + 7		4822 267 40242
Conn. 6		4822 267 40381
Conn. 8		4822 266 40064
Conn. 9		4822 265 20178
Core for L1/L101		4822 526 10111
F1	115 °C-250 mA	4822 252 20007
F2	1AT	4822 253 30021
Fuseholder for F2		4822 256 30171
K1 Rec. head		4822 249 20045
K2 PB-head		4822 249 20046
K3 Erase-head		4822 249 40064
LA1, LA101		4822 134 40408
M1, M101		4822 361 20186
M2		4822 361 20177
M3		4822 361 20185
ME1, ME101		4822 347 20091
NAB adapter		4822 528 20243
Panel 2		4822 214 30474
Panel 4		4822 218 10128
Plug 1		4822 267 60078
Plug 3 + 4		4822 266 30079
Plug 5 + 7		4822 266 30081
RE401		4822 526 20091
SK0		4822 276 10777
SK1		4822 277 10518
SK3		4822 277 10517
SK4		4822 277 10516
SK5 ÷ SK9		4822 276 60189
SK701		4822 278 90388
Socket for LED		4822 265 20177
T1		4822 146 20591

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